

Use pages 55-58 to answer the following questions.

1. Define the following terms and give an example of each.

Term	Definition	example
Relation		
Domain		
Range		
Mapping		
Function		
Vertical Line Test		

2. Given the relation: $\{(2,5),(3,6),(4,7),(4,8)\}$

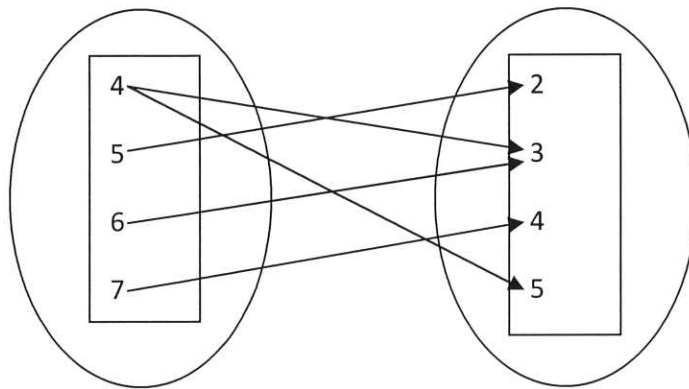
- a. State the elements of the domain. {_____}
- b. State the elements of the range. {_____}

3. Is the relation listed in #2 a relation? In a complete sentence, explain your answer.

A relation can be represented by a mapping diagram. The following is an example.

Relation as a list of ordered pairs: $\{(4,3), (4,5), (5,2), (6,3), (7,4)\}$

The mapping of the relation:



4. Draw a mapping diagram for the relation.
 $\{(1,3), (2,4), (3,5), (4,6)\}$

5. A function can be represented in the following ways. Give an example of each representation.

a. Mapping

b. Table

c. Rule(equation)

d. Graph

6. See page 58 to complete:

You read _____ notation $f(x)$ as _____ or _____ . Note that $f(x)$ does not mean _____ .

When the value of x is 3, $f(3)$ read _____ , represents the value of the function at $x=3$.

Evaluating a function means substituting a value for " x " in the expression and simplifying.

Example: If $f(x) = 2x + 5$, evaluate for $f(3)$.

$$F(x) = 2x + 5$$

$F(3) = 2(3) + 5$ Note: 3 was substituted in for x . Then evaluate the expression.

$$F(3) = 6 + 5$$

$$F(3) = 11$$

7. If $f(x) = x^2 - 2x + 4$, find the following.

a. $F(0) =$

b. $F(5)$

Assignment: pg 59 5-9, 12-22, 25, 28,
32, 34, 40-45.